



State Water Resources Control Board



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TO: Barry Hilton
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FROM: Renan Jauregui
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DATE: 7/14/06

SUBJECT: COMMENTS ON TENTATIVE WASTE DISCHARGE REQUIREMENTS
NPDES PERMIT NO. CA0084271 AND TIME SCHEDULE ORDER FOR
MOUNTAIN HOUSE COMMUNITY SERVICES DISTRICT, WASTEWATER
TREATMENT FACILITY, SAN JOAQUIN COUNTY

The State Water Board staff has reviewed the tentative NPDES Permit (Permit) and Time Schedule Order for the Mountain House Community Services District Wastewater Treatment Facility and provides the comments below.

Salinity

Staff has some concerns with regards to the lack of an effluent limitation for Electrical Conductivity (EC) in the Permit. The Permit concludes there is Reasonable Potential (RP) for the effluent to cause or contribute to an in-stream excursion above a water quality standard for EC which includes the south Delta D-1641 objectives and drinking water MCLs, and that dilution is not available. However, the Permit does not establish a final effluent limitation but instead includes the following requirements: a) Best Practicable Treatment or Control (BPTC) of Salinity (three years for completion); b) An EC Study (four years for completion); c) A Pollution Prevention Plan for Salinity (three years for completion); d) EC reduction goal of 1000 $\mu\text{mhos/cm}$ as a monthly average to be achieved in five years; and e) An interim effluent limit for EC of 1875 $\mu\text{mhos/cm}$ as a monthly average.

According to 40 CFR 122.44 (d) (1), when it is determined that a discharge causes, **has the reasonable potential to cause**, or contributes to an in-stream excursion above a State water quality standard including narrative objectives for water quality, the permit **must** contain effluent limits for that pollutant. In this case, there is RP for the discharge to exceed the EC south Delta D-1641 objectives and the drinking water MCLs, therefore, the permit must include effluent limitations for EC.

The Permit appears to conclude that the south Delta D-1641 objectives are not applicable to the Mountain House discharge at this time because of the reasons detailed in the permit and summarized as follows: First, the lengthy record of prior State Water Board decisions and water quality control plans for the Delta establish that the salinity problems in the south Delta are the result of many inter-related conditions, including water diversions upstream of the Delta, water diversions within the Delta for export and local use, high levels of salinity in irrigation return flows discharged to Delta waterways and tributaries, groundwater inflow, seasonal flow variations, and tidal conditions. Second, although the discharge of treated wastewater to the Delta or its tributaries under an NPDES permit can affect EC in the southern Delta, previous State Water Board decisions and water quality control plans do not discuss treated effluent discharges as a source of salinity in the southern Delta. Similarly, previously adopted implementation programs for complying with the EC objectives in the southern Delta have focused primarily on providing increased flows and reducing the quantity of salts delivered to the Delta and its tributaries by irrigation return flows and groundwater. The record also establishes that the implementation date for actions to implement the EC objective of 700 $\mu\text{mhos/cm}$ for April through August has been repeatedly postponed and that the State Water Board has adopted a report recommending review of south Delta EC objectives. Revised Water Right Decision 1641 placed primary responsibility for meeting the EC objectives protective of the AGR beneficial use on the Department of Water Resources (DWR) and the U.S Bureau of Reclamation (USBR), but did not require those agencies to implement the 700 $\mu\text{mhos/cm}$ EC objective until April 1, 2005. However, that date has passed, and the objective is now in effect. In fact, on 15 February 2006, the State Water Board adopted Water Rights Order No. 2006-0006 issued against DWR and USBR to Cease and Desist using their joint points of diversion (JPOD) from the Sacramento San Joaquin Delta if it violates any permit or license condition as specified in Water Right Order D-1641 while implementing the south Delta salinity EC water quality objective of 700 $\mu\text{mhos/cm}$, which reads in part:

“Beginning April 1, 2005, these conditions require DWR and USBR to meet the 0.7 EC Water Quality Objective for Agricultural Beneficial Uses at the following locations specified in Table 2 of D-1641 at page 182:

- 1) San Joaquin River at Brandt Bridge (Interagency Station No. C-6);
- 2) Old River near Middle River (Interagency Station No. C-8); and
- 3) Old River at Tracy Road Bridge (Interagency Station No. P-12). “

This action by the State Water Board clearly indicates that the south Delta EC objective of 700 $\mu\text{mhos/cm}$ is applicable in this section of the Delta until the objective is changed. However, according to the Permit, the nearest monitoring station at which D-1641 compliance is monitored is station P-12 (Old River at Tracy Road Bridge), approximately four miles west (downstream) of the discharge. The impact of the discharge on salinity at this location has not been determined. Therefore, the Permit could also include as part of the EC study to evaluate the impact of the discharge at this location prior to establishing an effluent limitation based on the south Delta EC objective.

In the interim, however, the permit should protect the MUN use by considering the EC Maximum Contaminant Levels (MCLs) ranges of 900 $\mu\text{mhos/cm}$ (recommended), 1600 $\mu\text{mhos/cm}$ (upper), and 2200 $\mu\text{mhos/cm}$ (short term). The effluent discharged also exceeds these objectives and, thus, has RP to exceed these levels in the receiving water at any location. Therefore, effluent limits must be established based on the MCLs.

In addition, the community is expected to grow since additional expansions are proposed going from a 0.45 mgd (Phase I) to 3 mgd (Phase II) to eventually 5.4 mgd (Phase III) which in turn will continue to add more salt in the effluent discharged to Old River if no limitation is established. The Regional Water Board has the obligation to protect beneficial uses and adopt waste discharge requirements, specifically establish effluent limitations, that adequately control pollutants from entering receiving waters and protect beneficial uses. By not including an effluent limitation for EC at this time, the Regional Water Board would be dismissing its regulatory responsibility and allowing the community to continue to grow and increase its salt loading and impacting the MUN and AGR beneficial uses of Old River.

The Regional Water Board may not adequately establish RP to exceed the south Delta D-1641 EC objectives at the nearest compliance location without additional information, but it cannot ignore the drinking water MCLs to protect the MUN use and should at a minimum establish effluent limitations based on the MCLs in accordance with the Basin Plan chemical constituents objective. State Water Board staff strongly recommends that the Regional Water Board include effluent limitations for EC.

Effluent Limitations

Review of data table F-4 and limitations calculation tables (F-6 thru F-13) as shown in the Fact Sheet indicates that coefficients of variation (CVs) used in the calculation of effluent limitations do not coincide with the CVs listed in the data table. When calculating effluent limitations (using LTA, AMEL and MDEL multipliers) for priority pollutants, the appropriate CV should be used and calculated in accordance with Section 1.4 of the SIP.

Some of the effluent limitations may need to be recalculated and the transposing error of the dibromochloromethane final effluent limitation be corrected.

Time Schedules

The Permit includes a time schedule (Provision VI.C.4.d) for compliance with three trihalomethanes (bromoform, dibromochloromethane, and dichlorobromomethane) within one year of start-up completion of the Phase II WWTF. However, per Effluent Limitations and Discharge Specifications IV A.1.a, the final effluent limitations for these constituents are in effect upon completion of the Phase II WWTF and not a year later. Therefore, the Permit should clearly state when these limitations become effective.

If you have any questions, please call me at (916) 341-5505 or you may e-mail me at rjauregui@waterboards.ca.gov.